

# Multipurpose Waste Disposal Bags for Heat Melt Compactor Application, Phase II

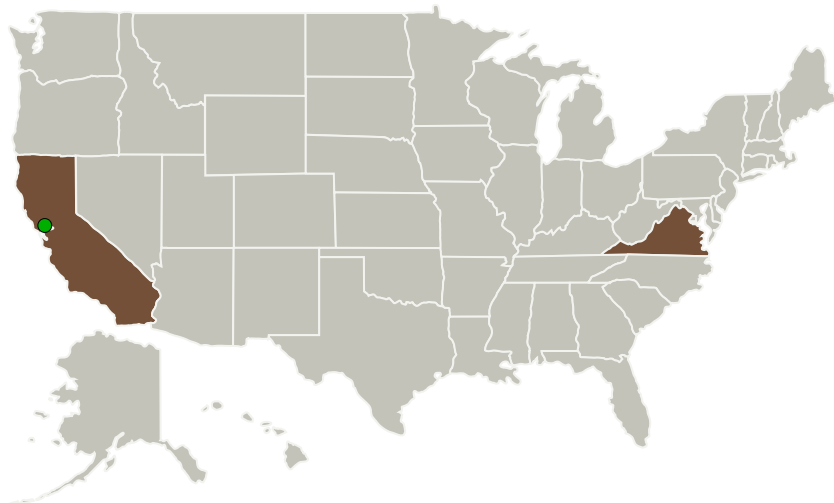
Completed Technology Project (2017 - 2020)



## Project Introduction

NASA's crewed spacecraft utilize storage containers for food water, supplies, trash and treated wastes. The trash bags occupy considerable vehicle storage and handling is a challenge to crewmembers. In order to reduce volume of the trash, microbial growth control and water recovery from trash, NASA has developed a heat melt compactor (HMC) device. In the Phase I project, a multipurpose trash bag that is compatible with HMC was demonstrated. The trash bag allowed for the recovery of water from waste and encapsulation of the solid waste after water recovery. In addition, the processed waste was protected against microbial growth for storing during long-term flights. The multifunctional trash bag developed in this Phase I project, benefits NASA in volume reduction, water recovery, radiation shielding and mitigation of contamination release in space.

## Primary U.S. Work Locations and Key Partners



Multipurpose Waste Disposal Bags for Heat Melt Compactor Application, Phase II Briefing Chart Image

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Organizations Performing Work	Role	Type	Location
Materials Modification, Inc.	Lead Organization	Industry Small Disadvantaged Business (SDB)	Fairfax, Virginia
● Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

## Primary U.S. Work Locations

California	Virginia
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## Project Transitions

**April 2017:** Project Start**August 2020:** Closed out

### Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/140939>)

## Images



### Briefing Chart Image

Multipurpose Waste Disposal Bags for Heat Melt Compactor Application, Phase II Briefing Chart Image  
(<https://techport.nasa.gov/image/129310>)



### Final Summary Chart Image

Multipurpose Waste Disposal Bags for Heat Melt Compactor Application, Phase II  
(<https://techport.nasa.gov/image/126206>)

## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Organization:

Materials Modification, Inc.

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

### Program Director:

Jason L Kessler

### Program Manager:

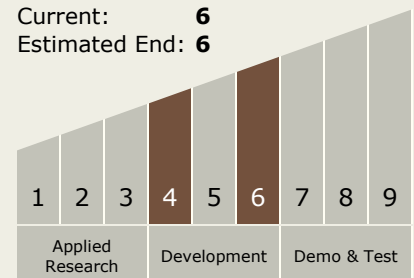
Carlos Torrez

### Principal Investigator:

Krishnaswamy K Rangan

## Technology Maturity (TRL)

Start: 4  
Current: 6  
Estimated End: 6



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## Technology Areas

### Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - └ TX06.1 Environmental Control & Life Support Systems (ECLSS) and Habitation Systems
    - └ TX06.1.3 Waste Management

## Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System